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Implementation of external hazards in Probabilistic Safety Assessment for nuclear power plants

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The paper will focus on the discussion on implementation of external hazards in the probabilistic safety assessment (PSA) methods for the extreme external hazards mainly focused on Seismic, Flooding, Meteorological Hazards (e.g. Storm, Extreme temperature, snow pack), Biological infestation, Lightening hazards, Accidental Aircraft crash and man- made hazards including natural external fire and external explosion. This will include discussion on identification of some good practices on the implementation of external hazards in Level 1 PSA, with a perspective of development of extended PSA and introduction of relevant modelling for external hazards in an existing Level 1 PSA.

This paper is associated to the European project ASAMPSA_E (www.asampsa.eu) which gathers more than 30 organizations (industry, research, safety control) from Europe, US and Japan and which aims at identifying some meaningful practices to extend the scope and the quality of the existing probabilistic safety analysis developed for nuclear power plants.